

CLAIMS

What is claimed is:

1 1. An electrical power supply for a
2 thermokeratoplasty tip that can provide an indication of an
3 electrical characteristic of a cornea, comprising:
4 an electrode pin;
5 a return pin; and,
6 a circuit that can provide a test current to said
7 electrode pin and the cornea, and an indication of the
8 electrical characteristic of the cornea in response to the
9 test current flowing through the cornea and said electrode
10 and return pins.

1 2. The power supply of claim 1, wherein the
2 electrical characteristic is a function of a voltage at
3 said return pin.

1 3. The power supply of claim 2, wherein the
2 electrical characteristic is a time rate of change of the
3 voltage at said return pin.

1 4. The power supply of claim 1, wherein said circuit
2 provides a series of radio frequency test pulses to said
3 electrode pin.

1 5. The power supply of claim 3, wherein a number of
2 radio test pulses is less than a number of radio frequency
3 operating pulses.

1 6. The power supply of claim 1, wherein said circuit
2 provides a wet indicator output signal if the electrical
3 characteristic is equal to or less than a lower threshold
4 value and provides a dry indicator output signal if the
5 electrical characteristic is equal to or greater than an
6 upper threshold value.

1 7. The power supply of claim 1, wherein said circuit
2 provides a series of operating radio frequency pulses if
3 the electrical characteristic is greater than the lower
4 threshold and less than the upper threshold.

1 8. The power supply of claim 1, wherein said circuit
2 varies an amplitude of said operating radio frequency
3 pulses in accordance with the electrical characteristic.

1 9. A method for testing an electrical contact between
2 a thermokeratoplasty electrode, a cornea and a return
3 element, comprising:

4 transmitting a test current through the electrode, the
5 cornea and the return element;

6 comparing an electrical characteristic of the cornea to
7 a threshold value; and,

8 generating an indicator output signal if the electrical
9 characteristic is equal to or is greater than an absolute
10 value of the threshold value.

1 10. The method of claim 9, providing a series of radio
2 frequency operating pulses if the electrical characteristic
3 is less than the absolute value of the threshold value.

1 11. The method of claim 10, varying an amplitude of
2 the radio frequency operating pulses in accordance with the
3 electrical characteristic.

1 12. The method of claim 9, wherein the electrical
2 characteristic is a time rate of change of a voltage of a
3 return pin.

1 13. The method of claim 9, wherein a wet indicator
2 output signal is generated if the voltage characteristic is
3 equal to or less than a lower threshold value, and a dry
4 indicator output signal is generated if the electrical
5 characteristic is equal to or greater than a upper
6 threshold value.

1 14. An electrode that can be inserted into an opening
2 of a handle, comprising:

3 a beam that a proximal end and a distal end, said
4 proximal end being adapted to be inserted into the handle
5 opening and having an anti-rotation feature that inhibits
6 rotation within the handle opening.

1 15. The electrode of claim 14, wherein said beam has a
2 tip at said distal end.

1 16. The electrode of claim 14, wherein said anti-
2 rotation feature includes a key.

1 17. The electrode of claim 14, wherein said anti-
2 rotation feature includes a flat surface within a circular
3 shaped proximal end.

1 18. The electrode of claim 14, wherein said anti-
2 rotation feature includes a square shaped proximal end.

1 19. The electrode of claim 14, wherein said anti-
2 rotation feature includes a triangular shaped proximal end.

1 20. The electrode of claim 14, wherein said anti-
2 rotation feature includes an ellipsoidal shaped proximal
3 end.

1 21. The electrode of claim 14, wherein said anti-
2 rotation feature includes a cam shaped proximal end.

1 22. The electrode of claim 14, wherein said anti-
2 rotation feature includes a spline formed within said
3 proximal end.

1 23. The electrode of claim 14, wherein said anti-
2 rotation feature includes a pair of beams located within
3 said proximal end.

1 24. The electrode of claim 14, wherein said anti-
2 rotation feature includes a rectangular shaped proximal
3 end.

1 25. The electrode of claim 14, wherein said anti-
2 rotation feature includes a hexagonal shaped proximal end.

1 26. A probe assembly, comprising:
2 a sleeve that has an inner channel; and,
3 an electrode that is threaded within said inner channel
4 and has a tip which extends from said sleeve.

1 27. The probe assembly of claim 26, wherein said
2 sleeve is constructed from a dielectric material.

1 28. The probe assembly of claim 26, further comprising
2 an adhesive that attaches said electrode to said sleeve.

1 29. A probe assembly, comprising:
2 an arm; and,
3 a probe that is coupled to said arm, said probe having
4 an electrode that extends from a probe body.

1 30. The probe assembly of claim 29, wherein said probe
2 body extends through an inner channel of an arm sleeve.

1 31. The probe assembly of claim 29, wherein said arm
2 includes a detent ball that is pressed into an outer groove
3 of said probe body.

1 32. The probe assembly of claim 29, wherein said probe
2 body includes a stop that engages said arm sleeve.

1 33. The probe assembly of claim 29, wherein said arm
2 has a male pin that is inserted into a female socket of
3 said probe.

1 34. The probe assembly of claim 29, further comprising
2 a probe holder that captures said probe.